

**REMARKS**

The Applicant respectfully requests reconsideration in view of the amendment and the following remarks. Support for newly added claims 31-41 can be found on page 8, lines 14-17, page 8, line 30 - page 9, line 4. Claims 22 and 26-41 are now pending. No claims have been canceled. No new matter has been added to the application as part of this amendment.

**Prior Art Rejections****35 U.S.C. § 102**

The Examiner rejected claim 27 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,068,925 and under 35 U.S.C. § 102(b) as being anticipated by GB 1,526,809. In response to this, Applicant has amended claim 27 to include at least one element that was not disclosed in either reference cited above, namely "substantially homogenous distribution of carbon fibers dispersed within said graphite body as substantially single mono-filaments of a random orientation, said carbon fibers present in an amount of about 1.5 wt% to about 3.0 wt% based on a weight of said graphite body." For the reason that amended claim 27 includes at least one element that is not disclosed in either of the references, the amended claim is patentable over the cited art and the Examiner is requested to withdraw the aforementioned rejection of claim 27.

**35 U.S.C. § 103**

The Examiner rejected claims 22, 26, and 28-30 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,993,905. The Examiner alleges that the aforementioned reference discloses a graphite body having a substantially homogenous distribution of carbon fibers dispersed within the graphite body as substantially random orientation and that the graphite body contains approximately 4 vol. % carbon fibers. The Examiner opined the 4 vol. % would be about 1.5 – 3.0 weight percent. The Examiner admitted that the reference did not recite that the fibers are monofilaments, but, concluded that it was within the level of one of ordinary skill in the art to use any known type of carbon fibers.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the

knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally the prior art reference (or references when combined) must teach or suggest all the claim elements. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicant respectfully requests that the Examiner withdraw the rejection for the reason that a proper *prima facie* case of obviousness has not been established. One reason that a proper *prima facie* case of obviousness has not been established is that the prior art reference does not teach or suggest all the claim elements. Applicant respectfully disagrees that the 4 vol % disclosed in the reference is the same as the claimed element of about 1.5 – 3.0 weight percent carbon fiber of claims 22, 26, and 28-30.

The disclosed 4 vol % is not the equivalent of 1.5 to 3.0 wt %, it is actually much more than 3.0 wt%. The attached declaration of Dr. Irwin C. Lewis is incorporated herein by reference as if fully written herein.

The rejection of claims 22, 26, and 28-30 is also improper in light of MPEP § 2143.01 for lack of motivation or suggestion to modify the reference. The Examiner alleges that it is within the level of one of ordinary skill in the art to use any known type of fibers for the Sheehan invention, such as monofilaments.

However, pursuant to MPEP § 2143.01, the proposed modification cannot render the prior art unsatisfactory for its intended use. In the reference a porous preform mat of intertwined carbon fibers is formed and impregnated with a liquid solution to form carbon-carbon composite. The Examiner suggests to modify the teachings of the reference to form the mat out of the claimed "carbon fibers dispersed with a carbon or graphite body as substantially single mono-filaments." However, the claimed carbon fibers are dispersed in manner not be intertwined. Thus, it is Applicant's position to disperse the carbon fibers as claimed in the reference would make the reference inoperable for its intended purpose because a person of ordinary skill in the art could not form the mat preform from carbon fibers dispersed with a carbon or graphite body as substantially single mono-filaments, and the rejection is improper.

Therefore, for the reason that the reference does not teach or disclose each and every element of the claimed invention and that the rejection lacks the necessary motivation or suggestion to modify the teachings of the reference, the Examiner is requested to withdraw the rejection of claims 22, 26, and 28-30.

No extension is deemed necessary to make the filing of this response timely. If there are any additional fees due in connection with the filing of this response, including any fees required for an additional extension of time under 37 C.F.R. 1.136, such an extension is requested and the Commissioner is authorized to charge or credit any overpayment to Deposit Account No.

21-0010.

For the reasons set forth above, Applicants believe that the claims are patentable over the references cited and applied by the Examiner and a prompt and favorable action is solicited. The applicants believe that these claims are in condition for allowance, however, if the Examiner disagrees, the applicants respectfully request that the Examiner telephone the undersigned.

Respectfully submitted,

UCAR CARBON CO., INC.

By   
Timothy R. Krogh  
Reg. No. 40,688  
Tel. (302) 778-8250

TRK/cam  
Enclosures

Marked-Up Version

Please amend the claims as follows:

27. (amended) A graphite body having a longitudinal coefficient of thermal expansion of about –  
0.5 x 10<sup>-6</sup>/°C to about 0.10 x 10<sup>-6</sup>/°C as measured from about 25 to about 200°C and  
substantially homogenous distribution of carbon fibers dispersed within said graphite body as  
substantially single mono-filaments of a random orientation, said carbon fibers present in an  
amount of about 1.5 wt% to about 3.0 wt% based on a weight of said graphite body.